

Western authorities as to the manufacture of metal for the rails. The ironmasters undertook to guarantee their rails for two years, and to institute a series of experiments for the purpose of producing iron of a quality best suited to the wear and tear of railway traffic.

—It appears from a return of French railways, that the estimated cost of constructing eighteen lines amounted to 927,410,000 f. (37,096,400 l.), of which thirteen were estimated to cost 624,110,000 f. (24,964,400 l.), and it has since been ascertained that they will cost 849,422,000 f. (33,976,880 l.), being on the average 36 per cent. above the estimates. Some of the lines cost between 60 and 75 per cent. above the estimates, while others cost no more than from 2½ to 16 per cent. above the sum specified. Two of the lines were completed within the estimates—viz.: the Paris and Rouen, and Boulogne and Amiens.

ELECTRO-TELEGRAPHIC PROGRESS.

ANOTHER matter-of-fact proof of what the telegraph can do, and ought to be now daily doing, together with the co-operative aid and expedition of the press, has of late occurred in the transmittal to London of a verbatim report of a public meeting at Liverpool, held on 18th ultimo, from two till four o'clock, p.m., and in which ten speeches and four resolutions were read and reported, besides a petition. The whole, by piecemeal, was reported, transcribed, dispatched, telegraphed, re-written, type-composed, corrected, printed, and published in London, by the *Shipping Gazette*, at thirty-three minutes past four o'clock—the very hour when the proceedings closed at Liverpool, 200 miles across the country.*

COMPETITIONS.

Restoration of Bridgewater Parish Church.

—We learn that the committee appointed to adjudicate upon the designs sent in for the restoration of this parish church, have decided in favour of those bearing the motto "*Spum Cuique*," and which prove to be the production of Messrs. Dickson and Breakspere, of Manchester.

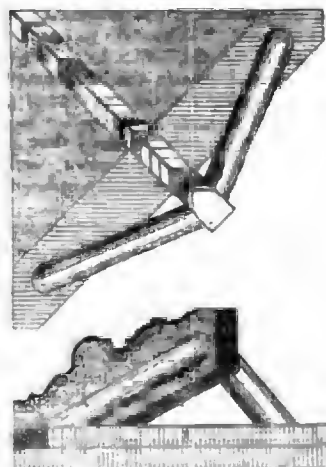
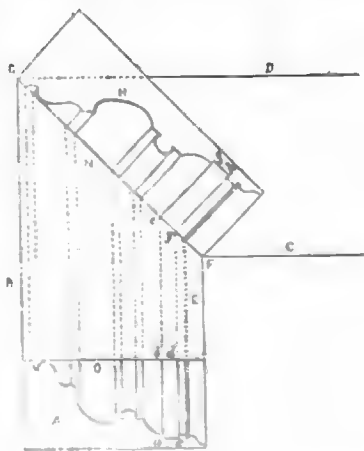
Bedford Corn Exchange.—Forty designs were received and the committee have selected one by Mr. Abbot. The style is Italian.

For laying out Ground at Croxson.—Correspondents complain of the length of time which has elapsed since these plans were sent in, and that no decision has been announced.

Asylum for Aged, Goocnesses.—The new asylum erected for this purpose in Kentish-town will be opened on the 12th, with a fancy-fair in aid of the building fund. The object is a noble one.

* What a pity it is that while thus doing all due justice to our really magical 'electro-telegraphic progress,' truth compels us to turn up on the adverse side of the picture, such complaints and expostulations as the following (from the *Morning Herald*), which still prevail, and which more than ecounter us, as others have done, for all that we ourselves have said, as well as for the public attention which we were the first to call to this disagreeable subject. In doing so, too, we must remark, that one of the latest instances of delay or neglect alluded to has been brought under our own notice also by Messrs. Wilmer and Smith of Liverpool. "The summer's cases of gross neglect and inattention which are continually occurring in the management of the Electric Telegraph Company call for reprehension in the strongest terms. This company, avowedly established for the convenience of the public, the facilitation of business, and quick transmission of intelligence, has departed from all these professions in more than one instance. The latest case which has been brought under our notice is that of Messrs. Wilmer and Smith, of Liverpool, who ought to have had the intelligence of the dastardly attempt to seriously alarm the Queen on Saturday evening last, for the purpose of setting at rest the loyal fears of the inhabitants. The message, however, was not delivered until Monday morning, the excuse made being that the house of business of Messrs. Wilmer and Co. was closed. The direction of one of the partners of the firm was, however, pointed on the door, and messages per telegraph had in many instances previously, been left at the private residence. On such an occasion, when more loyalty ought to have been a sufficient inducement to rapid motion, that lengthened delay took place. Not only, however, has the public to complain of manifold delays and inaccuracies, but also of the exorbitant rates charged for the transmission of messages. '*Carpe diem*' appears to be the motto of the Company, and whilst there is no competition, the disposition to set up to it is fully developed. Such a state of affairs cannot, however, be suffered in a commercial community; and unless the extant company take timely warning and a practical lesson from the Transatlantic Telegraph Companies, as regards accuracy, speed, and moderate charges, they may probably find another Richmond in the field." For the buncle and glory of our electrifying favourite *Punch*, we trust, now that we know somewhat of the real medium approach, that he will not erroneously ascribe the contrast between the celerity of the transmittal of the "electricity" eastward, and its tardiness westward, to some recheck, but imagine its electric magnetic facilities in the one case, and obstacles in the other, respectively connected with our diurnal rotation from east to west, from Liverpool to London. But, however wisely mistaken as to cause, commend us to *Punch* for *effus*, as the Electro-Telegraphic Company may come to know soon to their cost, unless they look sharp with their—N. E. W. S.—north, east, west, and south.

MOULD TO RUN THE MITRES OF CORNICES.



MOULD TO RUN THE MITRES OF CORNICES.

HAVING had occasion to complain of the imperfect manner in which plasterers finish mitres in moulded cornices, &c., I was led to seek for a remedy in the form of a mould that would run them perfectly, in lieu of the old system of hand-working; and, as you are always ready to give publicity to anything advantageous to the building classes, I beg to submit the inclosed sketch and explanation for a mould, *horsed*, that will run a moulding at right angles, and leave the mitre as perfect as any other portion of the work. Another advantage it has is a great saving of time, as, instead of taking off the mould at the mitre (according to the old system), it is taken off in the straight part of the work and finished with a small joint-rule, the same as floating a plain piece of work, as the moulding each side of the vacuity would form a *scree* for the rule to work against.

The first thing to be done is, to trace the required mould from the given mould at the angle you wish, in the same manner as an angle bracket is traced. But as the generality of plasterers are but little acquainted with geometry, it may not be out of place to show the method for laying down a section of the given mould (which lays no claim to architectural beauty, but merely to illustrate the subject), and tracing the mould required for a right-angle from it.

Let A be the section of the given mould, and from it draw the line B at pleasure, and on the line B erect the perpendicular D, then from the section A draw the line E parallel to B; on the line E erect the perpendicular C the same distance from D as E is from B; then connect the angles F G with the line N, which will be the mitre line; draw the line O parallel to W, then draw the lines ab, cd, &c. to the line N, but parallel to E B; on the line N erect perpendiculars, and make ef, gh, &c., equal to ab, cd, &c. (the more lines drawn, the nearer truth will be the mould), then will the moulding H be the moulding required.

The mould thus traced is then *horsed* at a right-angle mitre, on a double *horse*, forming a right angle, as the lines B, G, D, and the mould is in the same position when *horsed* as the line N stands with the lines B, G, D: the sketch P is the plan of a mould *horsed* and R the elevation.

Before commencing to run the moulding, the running rules must be fixed on each side of the mitre, so that when the mould is run up at the mitre the rule on the other wall is in its place to take the mould along the wall, and to finish the mitre, and on any part of the wall take off the mould and turn it; then it will be in its work for the next angle, those being the places that I before mentioned that will have to be finished with the joint-rule. For running external angles there must be a stop fixed to the running rule at the mitre, to keep the mould from cutting the "throats" of any undercut mouldings.

It must be understood the above mould will only run a moulding at right angles, that is, to finish the mitre. If, for instance, it was required to run the same moulding in an obtuse angle, the mould before you would be too long, and if to run an acute angle it would be too short; consequently, if you wish to run a mitre clean, the mould must be traced and *horsed* accordingly, but in the same way as I before described.

It must be understood, that whatever angle the mould is traced for, the *horse* must be made to the same angle, so that they be in conformity with each other.

JAMES DRAKE.

DOUBLE TRAPPING DRAINS.

WITH reference to the letter on this subject, p. 233, *ante*,—if your correspondent will invert an empty wine-glass, and keeping the mouth horizontal, press it below the surface of some water, in a tumbler, he will see that a considerable quantity of water will enter the wine-glass, without any of the air escaping; and, therefore, that it is possible for a paulful of water to pass through a trap, along a drain, beneath the gas, through another trap, without measuring a paulful of gas into the house. Double trapping drains is not new—the fact, the probable evil, and the effectual remedy, are given in *THE BUILDER*, vol. iii., p. 453, as an extract from the "*Penny Cyclopædia*." I have no doubt but that the necessity for the ventilation of all receptacles, where decomposition takes place, is fast forcing its way. Professor Hoaking, in his admirably suggestive work on the "*Regulation of Buildings in Towns*," points out the necessity very clearly, but it occurs to me, his barrel of beer illustration, p. 234, a little modified, would illustrate the retort formed by a double trapped drain, for it is (unless perfectly clean from deposit of every kind) a retort of certain capacity, in which gas is generated, but confined by the trap at each end, until a sufficient quantity is evolved, to overcome, by its elasticity, or expansive force, the combined resistance of the trap and atmosphere: an escape then takes place, at the highest point of communication, where there is least resistance, until equilibrium is restored; and will continue to do so at intervals, unless no gas is generated, or provision is made for its harmless escape.

The article, p. 232, respecting small drains, appears opposed to the evidence given in favour of them (*THE BUILDER*, vol. iii., p. 523, and vol. iv., p. 109), but how often it occurs that the blame attached to an instrument should be attached to individuals. I have no doubt a 6-inch pipe would be stopped at one house when a 2½-inch would suffice at the next, entirely from the difference in the habits of servants. If parts of hearth-brooms, mops, flannels, and hair are to pass through traps and drains, then greater capacity must be allowed than is necessary where ordinary sewage passes.

If any one of your readers interested in the